In re Appln. of Virette et al.
Application No. 10/582,025
Response to Office Action of May 12, 2008

Remarks

The following remarks are responsive to the Office Action of May 12, 2008. At the time of the Office Action, claims 1-26 were pending.

- Claims 1-12, 15-16, 21-22 and 24 were rejected under 35 U.S.C. §103(a) as obvious over Kolesnik et al. (U.S. Patent No. 5,729,655, hereinafter Kolesnik) in view of Carter et al. (U.S. Patent No. 5,987,506, hereinafter Carter).

- Claims 13-14, 23 and 25-26 were rejected under 35 U.S.C. §103(a) as obvious over Kolesnik et al. in view of Carter et al., and further in view of Jabri et al. (U.S. Patent No. 6,829,579, hereinafter Jabri).

- Claims 17-20 were rejected under 35 U.S.C. §103(a) as obvious over Kolesnik et al. in view of Carter et al., in view of Jabri et al., and further in view of Aguilar et al. (U.S. Patent No. 7,272,556, hereinafter Aguilar).

- Claim 24 was rejected under 35 U.S.C. §101 as directed to a non-statutory subject matter.

- Claims 14 and 26 were rejected under 35 U.S.C. §112, second paragraph.

- Claim 2 and the abstract were objected to.

Objection to the Abstract

The abstract of the disclosure is objected to as the abstract makes reference to function blocks of the drawings. The abstract has been amended to make the necessary correction.

Objection to Claim 2

Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. The Examiner contends that claim 1 cites the execution of common functions of functional units in a common calculation module for at least some of the coders. The Examiner further contends that claim 2 cites that the calculation module comprises at least one function unit of one of the coders, which does not further limit parent claim 1 because at least some still describes at least one. Applicants respectfully traverse and submit that claim 2 actually limits parent claim 1.

In re Appln. of Virette et al.
Application No. 10/582,025
Response to Office Action of May 12, 2008

Indeed, claim 1 recites executing the command function once and for all for at least some of the coders in a command calculation module, while claim 2 recites that the command calculation module for executing the command functions comprises the same functional unit as the coders. Hence, according to claim 2, the command functions executed in the calculation module are executed by way of the functional units of the coders. Thus, Applicants respectfully submit that claim 2 limits claim 1 by reciting that the command calculation module comprises the functional units of the coders for executing the command functions.

35 U.S.C. §112 Rejections of Claims 14 and 26

Claim 14 is rejected under 35 U.S.C. §112, second paragraph, as failing to set forth the subject matter which Applicants regard as their invention. The Examiner contends that claim 14 cites an "at least partial coding functional unit" where it is not fully understood what exactly is meant by an at least partial coding. Claim 14 has been amended to provide further clarification.

Claim 26 is rejected under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential elements. The Examiner contends that claim 26 claims a device and is dependent on claim 25, which is a system claim. Claim 26 has been amended to recite a system.

35 U.S.C. §101 Rejection of Claim 24

Claim 24 is rejected under 35 U.S.C. §101, as directed to non-statutory subject matter. Claim 24 has been amended according to the Examiner's recommendations.

35 U.S.C. §103(a) Rejections of Claim 1-26

Claim 1-12, 15-16, 21-22, and 24 are rejected under 35 U.S.C. §103(a), as being unpatentable over Kolesnik in view of Carter. In addition, claims 13-14, 23, 25-26 are rejected under 35 U.S.C. §103(a), as being unpatentable over Kolesnik in view of Carter and further in view of Jabri. Furthermore, claims 17-20 are rejected under 35 U.S.C. §103(a), as being unpatentable over Kolesnik in view of Carter, further in view of Jabri and further in view of Aguilar. Applicants respectfully traverse.

10

In re Appln. of Virette et al.
Application No. 10/582,025
Response to Office Action of May 12, 2008

Kolesnik discloses an apparatus for coding speech. The apparatus disclosed comprises a prefilter 200 for reducing speech noise, a short-term prediction analyzer, for extracting linear prediction coefficients (LPC), and for converting said LPC into line spectrum pairs (LSP), a variable rate LSP encoder (202) for converting said LSP into codewords of a predetermined binary code. See Kolesnik, Fig. 2a; col. 5, line 45-col. 6, line 22. The apparatus disclosed further comprises an encoder 213 for jointly coding the codewords outputted from the variable rate LSP encoder and excitation parameters derived from the signal outputted from the prefilter. See Kolesnik, col. 9, lines 3-6.

The variable rate LSP encoder 202 is further described with reference to Fig. 4 of Kolesnik. This variable rate LSP encoder comprises three different variable rate encoders 407, 408 and 411. The LSP inputted to the variable rate LSP encoder 202 undergo three different processes 401, 404, and 406 which determine each input of said different variable rate encoders. See Kolesnik, Fig. 4.

Kolesnik discloses that the variable rate encoders 409, 411 may use a same Huffman code. See Kolesnik, col. 13, lines 55-58.

In the Office Action, the Examiner contends that Kolesnik discloses the claimed identifying and marking steps. Applicants respectfully traverse.

First, Kolesnik fails to teach or suggest the claimed compression coding method in which an input signal feeds in parallel a plurality of coders. Indeed, it is clear that encoder 213 and variable rate LSP encoder 202 do not receive the same signal as an input. See Kolesnik, Fig. 2a. Also, it is clear that the different variable rate encoders 407, 409, and 411 comprised in the variable rate LSP encoder do not receive the same input signal. See Kolesnik, Fig. 4. Indeed, the LSP which are received by the variable rate LSP encoder followed three different paths. Each path outputs one of the RP, RD and RA signals. See Kolesnik, Fig. 4. These signals are then provided to the different variable rate encoders 407, 409, and 411. Thus, the analogy made between the variable rate encoders of Fig. 4 of Kolesnik and the claimed compression coders is not pertinent.

Second, Kolesnik fails to teach or suggest the claimed element of marking common functions. The Examiner's contentions according to which Kolesnik, by disclosing that two variable rate encoders may use a same Huffman code, would anticipate the claimed step of

In re Appln. of Virette et al.
Application No. 10/582,025
Response to Office Action of May 12, 2008

marking functions data common from one coder to another, is not correct. Indeed, the generation of the Huffman code is not described as a function which is carried out in the variable rate encoders. See Kolesnik, col. 13, lines 55-57. More precisely, by disclosing "the Huffman codes are pre-computed using a large speech data base," Kolesnik makes clear that the Huffman code generation is not performed by the variable rate encoders. See Kolesnik, col. 13, lines 57-58.

Hence, it should be emphasized that Kolesnik does not disclose the claimed identifying and marking steps because Kolesnik fails to disclose a coding method in which a same input signal is fed to a plurality of coders in parallel. Furthermore, Kolesnik fails to disclose a step of marking functions that are common from one coder to another because the generation of the Huffman codes disclosed by Kolesnik is not performed by the variable rate encoders.

As far as Carter is concerned, Applicants respectfully submit that one of ordinary skill in the art would not turn to Carter to resolve the deficiencies of the Kolesnik reference.

Indeed, Carter discloses a computer system that enables to put in common persistent memory of computers so as to enable these computers to have access to a large memory space. See Carter, Abstract; col. 6, lines 3-21.

Carter discloses a method for sharing memory resources over a communication network. Carter only discloses features which deal with memory addressing, and functionalities linked to reading and writing on the shared memory space.

It should be emphasized that in the present application, each coder is able to implement the command function but the function is executed once and for all for the coders while Carter discloses putting in common several memory spaces in order to create a commonly shared memory space. In the present invention, the command function is not shared in the sense of Carter.

Thus, nothing in Kolesnik or Carter would lead a person with ordinary skills in the art to consider Carter's disclosure for enhancing performance in a multiple compression coding system.

In re Appln. of Virette et al.
Application No. 10/582,025
Response to Office Action of May 12, 2008

Based on the foregoing, Applicants respectfully submit that claim 1 is allowable. The other independent claims are believed to be allowable at least for the same reasons as those given in view of claim 1.

Concerning the dependent claims, Applicants respectfully submit that they are allowable as they depend on patentable base claims, and that the addition of the Jabri and Aguilar references, which were cited for reasons related to elements of dependent claims 13, 14, 17–20, and 23, corresponding independent claim 25, and its dependent claim 26, fail to address the deficiencies with respect to independent claim 1 as discussed above with respect to Kolesnik and Carter.

For these reasons, Applicants respectfully request that the Examiner withdraw the 35 U.S.C. §103 rejection from the application.

Conslusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned.

Respectfully submitted,

/david r. morris/

Brian C. Rupp, Reg. No. 35,665
Fieldi Chan, Reg. No. 59,053
Mark Bergner, Reg. No. 45,877
David R. Morris, Reg. No. 53,348
DRINKER BIDDLE & REATH LLP
191 N. Wacker Drive, Suite 3700
Chicago, Illinois 60606-1698
(312) 569-1000 (telephone)
(312) 569-3000 (facsimile)
Customer No.: 08968

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